

# PATENT ABSTRACTS OF JAPAN

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## CLAIMS

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### [Claim(s)]

[Claim 1] The nonaqueous rechargeable battery using cathode active material which consists of  $\text{Li}_x\text{NiO}_2$  ( $0 < x \leq 1$ ) coated with at least one sort  $\text{Li}_x\text{CoO}_2$  ( $0 < x \leq 1$ ) and  $\text{Li}_x\text{MnO}_2$  ( $0 < x \leq 1$ ).

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

#### [The purpose of this invention]

To offer the nonaqueous rechargeable battery that has better cycleability and good life by control the reaction with electrolyte.

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### [Example]

#### [0014]

1.  $\text{LiNiO}_2$  was obtained by a well-known method.
2.  $\text{LiNiO}_2$  powder + water-soluble salt containing the transition metals (such as  $\text{Co}(\text{NO}_3)_2$  and  $\text{Mn}(\text{NO}_3)_2$ ) were mixed in aqueous solution.
3. The suspension + alkali salt (such as  $\text{LiOH}$ ) were mixed.  
So, we obtained  $\text{LiNiO}_2$  coated with the transition metals containing material.
4. The coated material was washed and dried.
5. The coated material + lithium hydroxide is heated for about 2 to 3 hours.

Spattering and mechanochemical coating are mentioned as other methods to obtain the coated material.

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